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FOR
SERVICE BULLETINS

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354 Ceiling Mounted Lighting System Service Bulletin Number: 100

Subject: ***Ball Pivot / Cross Tube Assembly Replacement***
Applicable Models: ***354 (-001, -007, -009, -010, -018, -019, -040)***
Serial Numbers: ***KN001006 thru KN001007, LY001002, MA001001, MB001000 thru MB001007, MD001004 thru MD001013 ME001002 thru ME001003, MZ001006 thru MZ001009***
Required Tools: ***Allen Wrenches (1/4 in., 3/16 in., & 1/8 in.)***

On the units listed above, the screws securing the cross tube assembly to the pivot joint assembly may become loose causing the cross tube assembly to fall from the down tube. All units with the serial numbers listed above should be fitted with a new Ball Pivot / Cross Tube Assembly. Perform the replacement procedure as follows:

Ball Pivot / Cross Tube Assembly Removal / Installation

A. Removal

WARNING
To prevent the possibility of electrical shock, always disconnect electrical power to the light before removing components or making any repairs . Failure to comply with these instructions could result in severe personal injury or death.

(1) Disconnect electrical power to unit.

(2) Remove screw (1, Figure 1) and slide ball pivot sleeve (2) upward.

(3) Disconnect two wires (3) from two wires (4).

CAUTION
The cross tube / lighthead is very heavy. It may be necessary to use an assistant when performing the following step. Use proper lifting techniques to prevent injury or back strain.

(4) While supporting cross tube / lighthead (5), remove two screws (6); then remove cross tube / lighthead from down tube (7).

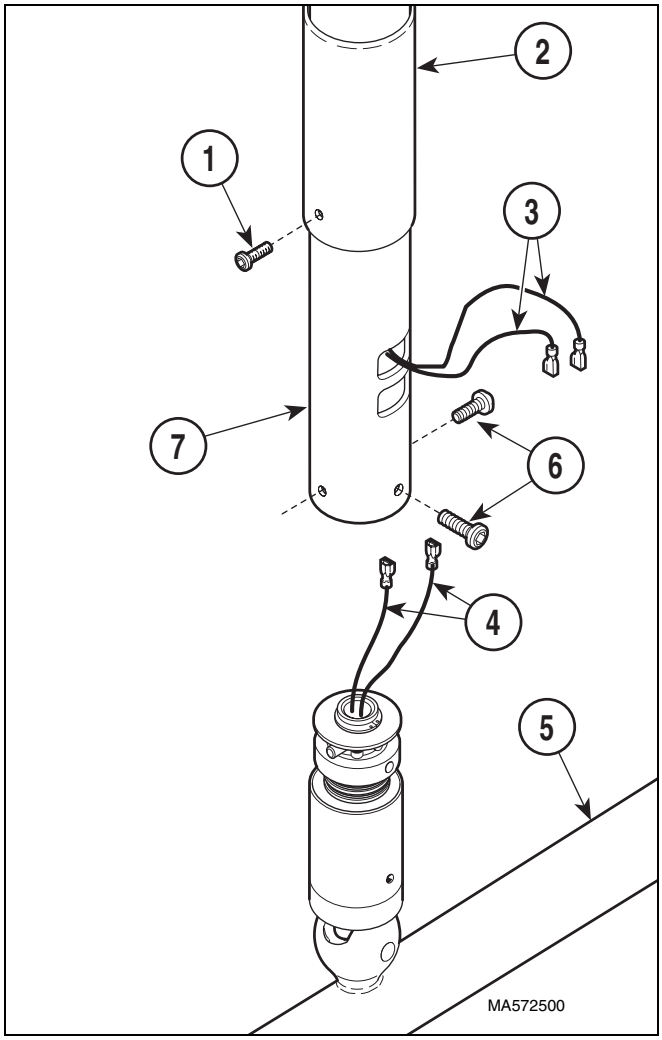

Figure 1. Cross Tube Removal

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(5) Remove two screws (1, FIgure 2) and separate lighthead (2) from lamp tube (3).

(6) Disconnect two wires (4) from two bulb socket wires (5). Remove lighthead (2).

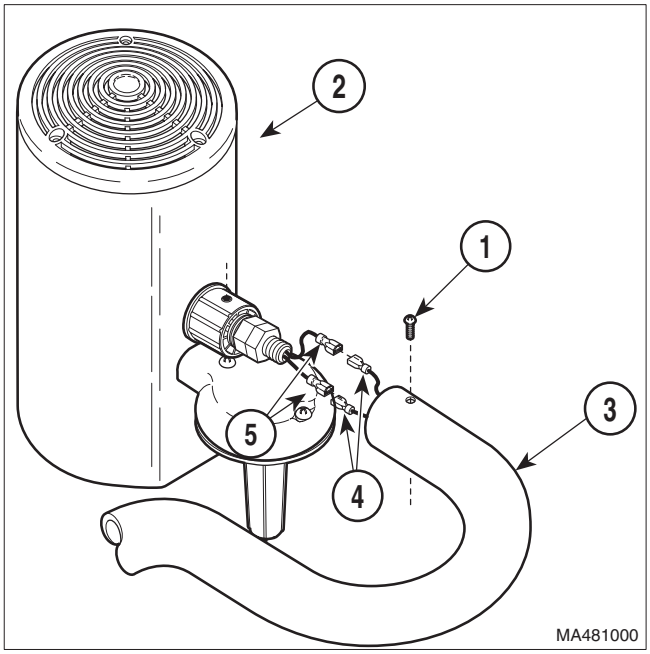

Figure 2. Lighthead Removal

(7) Remove screw (1, Figure 3) and housing cap (2) from counterbalance housing (3).

EQUIPMENT ALERT
In the following step, do not remove screws (4) or allow counterbalance housing (3) to separate. To prevent separation, wrap wire ties around housing before loosening two screws (4).

(8) To remove counterbalance housing (3) from cross tube (5): loosen ***(but do not remove)*** two screws (4).

B. Installation

(1) Position cross tube (5, Figure 3) with ball pivot joint (not shown) up.

NOTE
Position counterbalance housing (3) with the adjustment screw (6) to the top as shown.

(2) Position counterbalance housing (3) so that two screws (4) align with holes in cross tube (5); then tighten two screws (4).

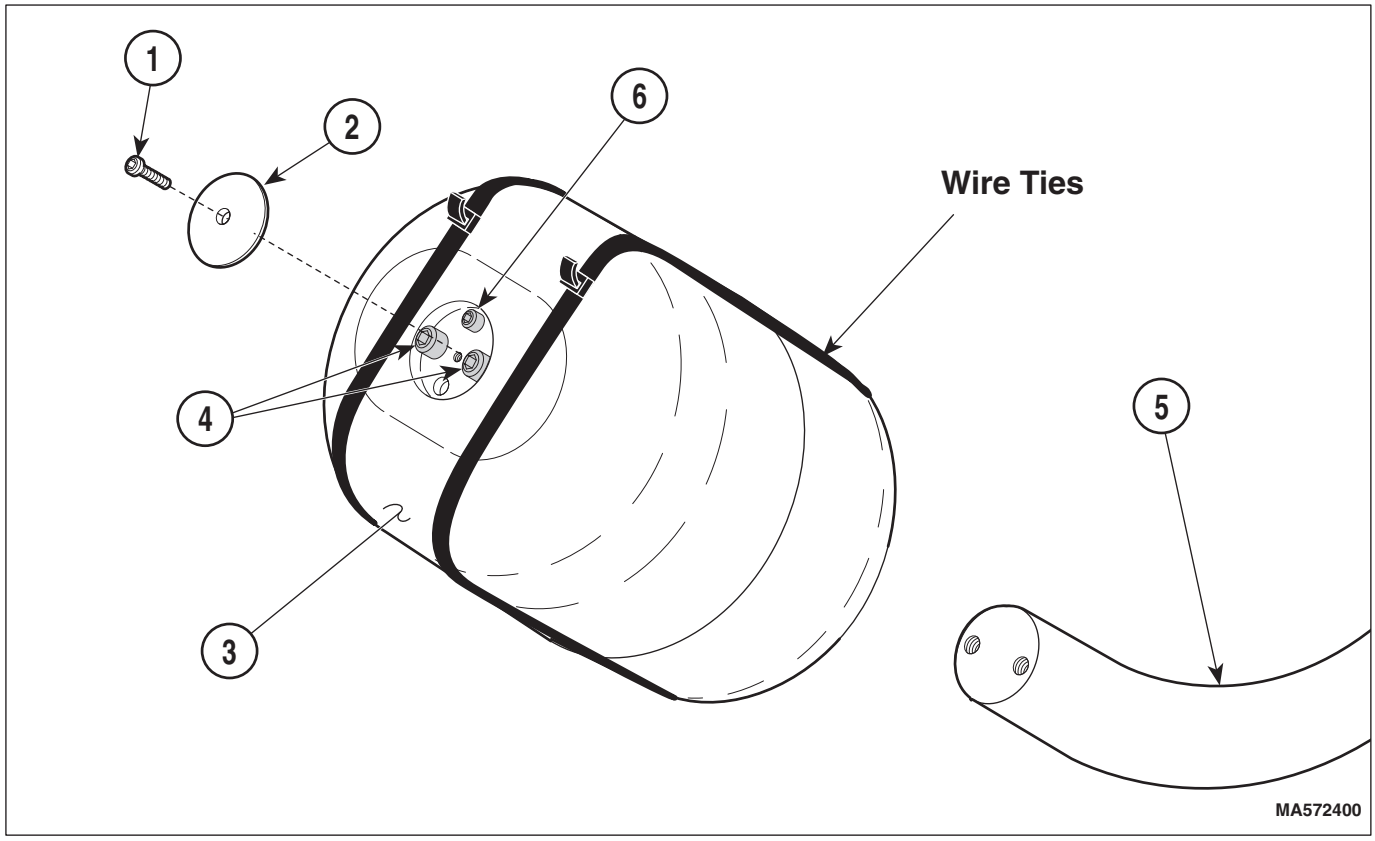

Figure 3. Counterbalance Housing Removal / Installation

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(3) Position lighthead (1, Figure 4) near lamp tube (2); then connect two bulb socket wires (3) to two wires (4).

WARNING
Make sure screws (5) are installed correctly. Failure to install screws correctly could allow lighthead to fall resulting in patient or staff injury.

(4) Install lighthead (1) on lamp tube (2) and secure with two screws (5).

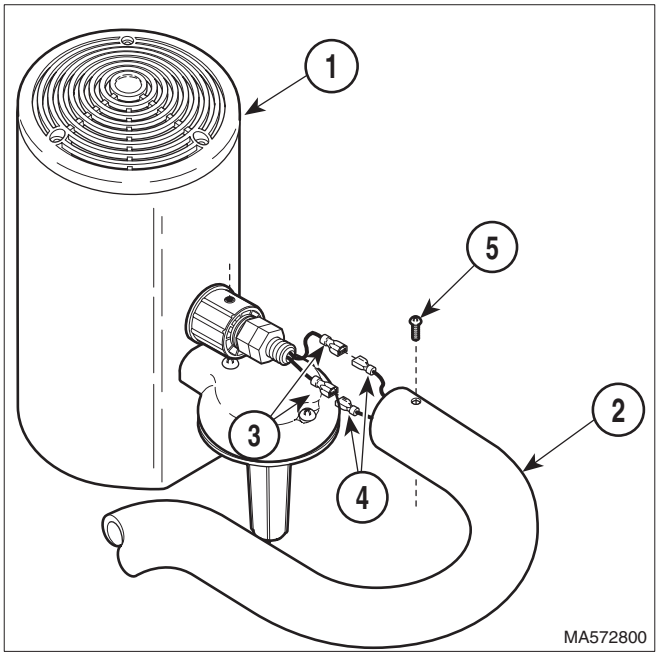

Figure 4. Lighthead Installation

WARNING
Make sure screws (4, Figure 5) are installed correctly. Failure to do so could allow the light assembly to fall, striking and injuring a patient or staff member.

CAUTION
The cross tube / lighthead is very heavy. It may be necessary to use an assistant when performing the following step. Use proper lifting techniques to prevent injury or back strain.

NOTE
There are three screw holes in ball pivot joint (3); two holes are larger and have courser threads. Use these two holes when installing screws (4). The other hole is for securing ball pivot sleeve with screw (7).

(5) Feed two wires (1, Figure 5) up into down tube (2); then insert ball pivot joint (3) into down tube and secure with two screws (4).

(6) Connect two wires (1) to two wires (5).

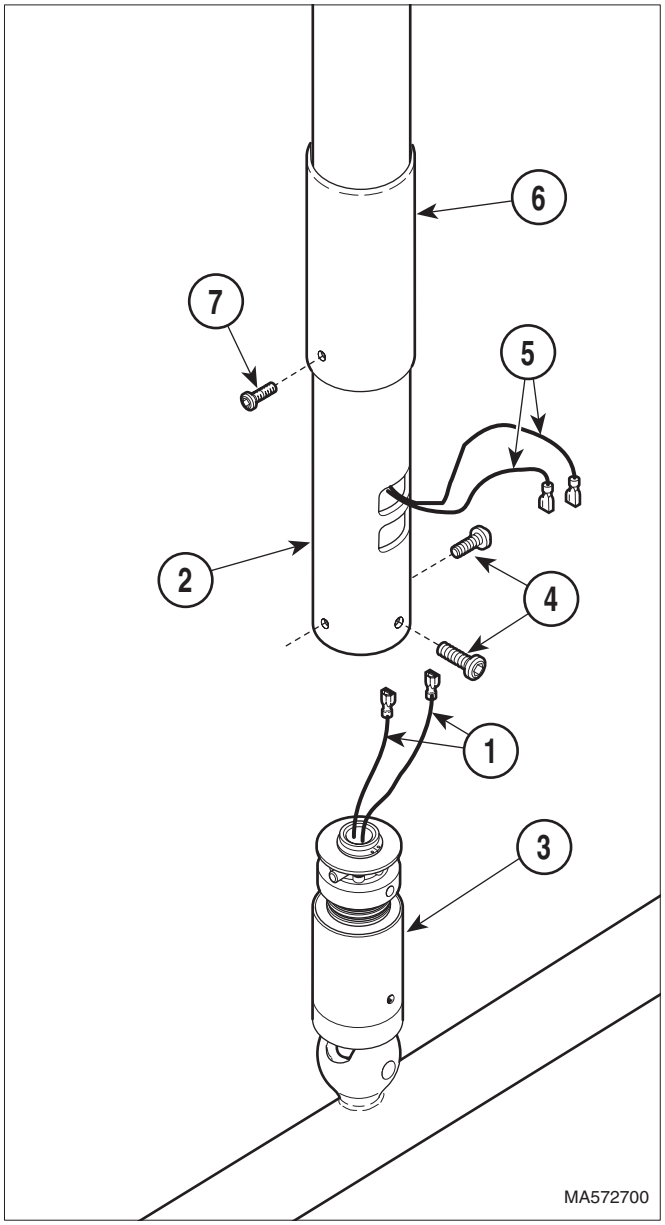

Figure 5. Cross Tube Installation

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(7) Adjust cross tube counterbalance and/or ball pivot joint tension if necessary. (Refer to ***Adjustment Procedure***).

(8) Slide ball pivot sleeve (6) down into position and secure with screw (7).

(9) Connect electrical power to unit.

ATTENTION!
After the new cross tube assembly has been installed and properly adjusted: repackage the old cross tube assembly, attach shipping label (included) and return it to Midmark.

Adjustment Procedure

Rotate the cross tube thru its entire range of motion, release at several positions and observe. The light should move easily, yet stay in position without drifting.

If the lighthead moves too easily / stiffly or drifts up / down when released, perform the following adjustment procedure.

A. Adjustment

(1) Remove screw (1, Figure 6) and slide ball pivot sleeve (2) up out of way.

(2) Rotate cross tube (3) until adjustment hole (4) appears in the adjustment window opening.

(3) Insert screwdriver into adjustment hole (4). Then, using screwdriver, rotate ball pivot cam (5) to assembly / disassembly setting. Remove screwdriver.

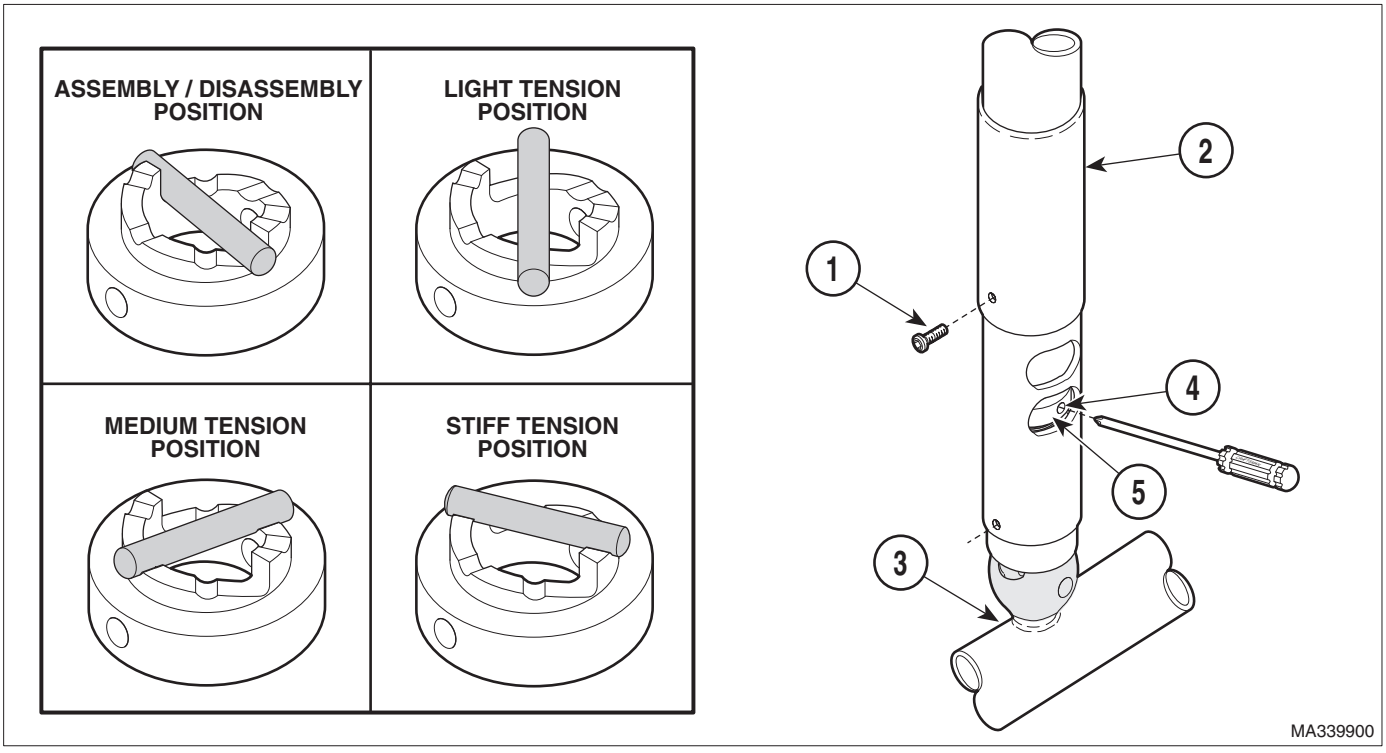

Figure 6. Ball Pivot Joint Tension Release / Adjustment

(4) Remove screw (1, Figure 7) and housing cap (2) from ballast housing (3).

(5) Adjust screw (4) until cross tube balances in a horizontal position.

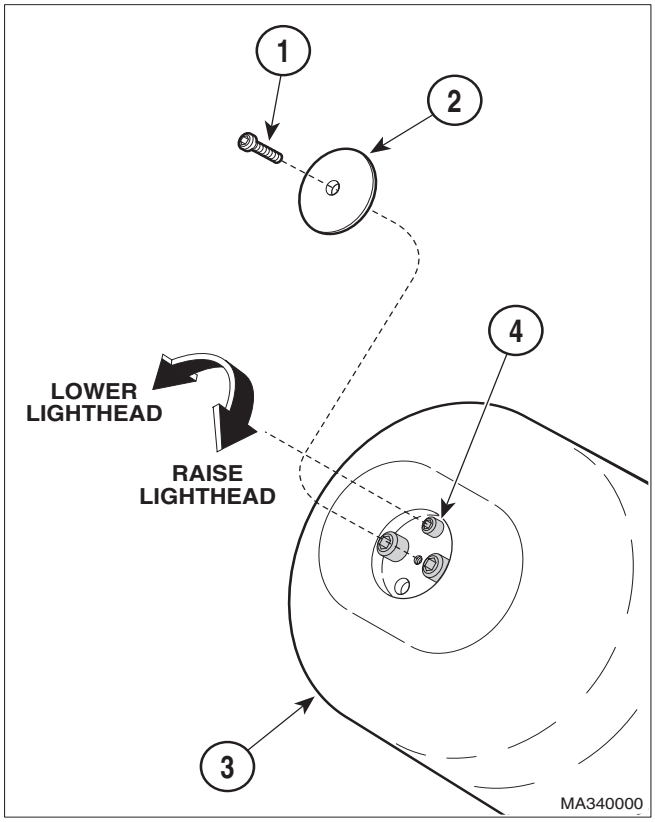

Figure 7. Cross Tube Counterbalance Adjustment

NOTE

One way to determine if cross tube is balanced properly is to raise the cross tube above horizontal, release it, and observe where it stops. Then, lower the cross tube below horizontal plane, release it, and observe where it stops. The cross tube should return to the horizontal position and remain there; if it does, the cross tube counterbalance is adjusted properly. Turning screw (4) in clockwise direction will raise lighthead end of cross tube. Turning screw (4) in counterclockwise direction will lower the lighthead end of cross tube.

(6) Install housing cap (2) on ballast housing (3) and secure with screw (1).

(7) Insert screwdriver into adjustment hole (4, Figure 6). Then, using the screwdriver, rotate ball pivot cam (5) to the light, medium, or stiff setting as desired by the operator(s). Remove screwdriver.

(8) Slide ball pivot sleeve (2) down into position and secure with screw (1).

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355 Ceiling Mounted Lighting System Service Bulletin Number: 101

Subject: ***Ball Pivot / Cross Tube Assembly Replacement***
Applicable Models: ***355 (-001 thru -004, -007 thru -010, -012 thru -014, -025, & -028)***
Serial Numbers: ***FS002611 thru FS002813, FT002982 thru FT003114, HV001117 thru HV001134, HW001152 thru HW001186 JC001041 thru JC001057, JD001005, MS001451 thru MS001463***
Required Tools: ***Allen Wrenches (1/4 in., 3/16 in., & 1/8 in.)***

On the units listed above, the screws securing the cross tube assembly to the pivot joint assembly may become loose causing the cross tube assembly to fall from the down tube. All units with the serial numbers listed above should be fitted with a new Ball Pivot / Cross Tube Assembly. Perform the replacement procedure as follows:

Ball Pivot / Cross Tube Assembly Removal / Installation

A. Removal

WARNING
To prevent the possibility of electrical shock, always disconnect electrical power to the light before removing components or making any repairs . Failure to comply with these instructions could result in severe personal injury or death.

(1) Disconnect electrical power to unit.

(2) Remove screw (1, Figure 1) and slide ball pivot sleeve (2) upward.

(3) Disconnect two wires (3) from two wires (4).

CAUTION
The cross tube / lighthead is very heavy. It may be necessary to use an assistant when performing the following step. Use proper lifting techniques to prevent injury or back strain.

(4) While supporting cross tube / lighthead (5), remove two screws (6); then remove cross tube / lighthead from down tube (7).

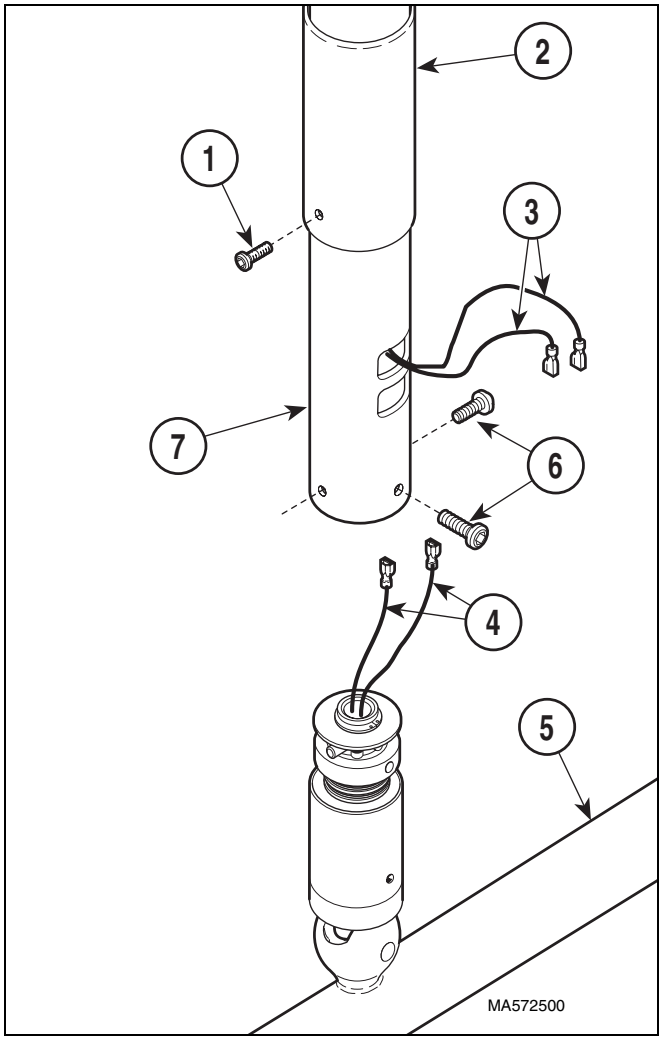

Figure 1. Cross Tube Removal

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(5) Slide pivot sleeve (1, Figure 2) up out of way.

(6) Remove two screws (2) and separate lighthead (3) from lamp tube (4).

(7) Disconnect two wires (5) from two bulb socket wires (6). Remove lighthead (3).

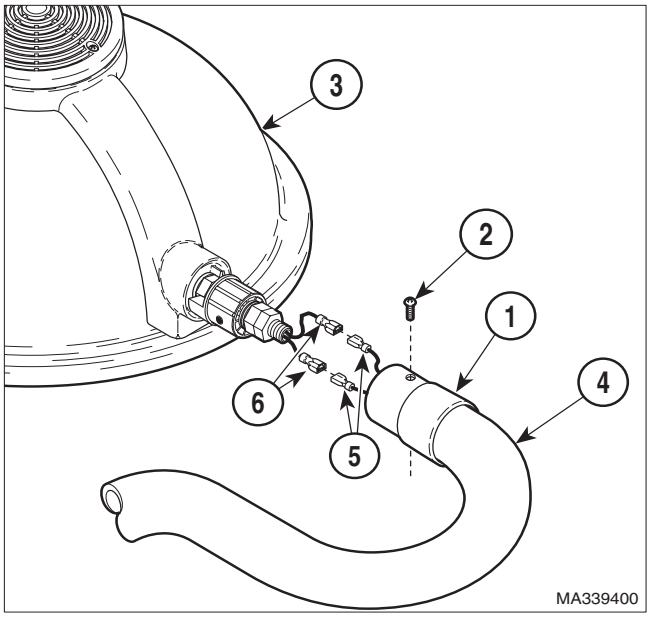

Figure 2. Lighthead Removal

(8) Remove screw (1, Figure 3) and housing cap (2) from counterbalance housing (3).

EQUIPMENT ALERT

In the following step, do not remove screws (4) or allow counterbalance housing (3) to separate. To prevent separation, wrap wire ties around housing before loosening two screws (4).

(9) To remove counterbalance housing (3) from cross tube (5): loosen ***(but do not remove)*** two screws (4).

B. Installation

(1) Position cross tube (5, Figure 3) with ball pivot joint (not shown) up.

NOTE

Position counterbalance housing (3) with the adjustment screw (6) to the top as shown.

(2) Position counterbalance housing (3) so that two screws (4) align with holes in cross tube (5); then tighten two screws (4).

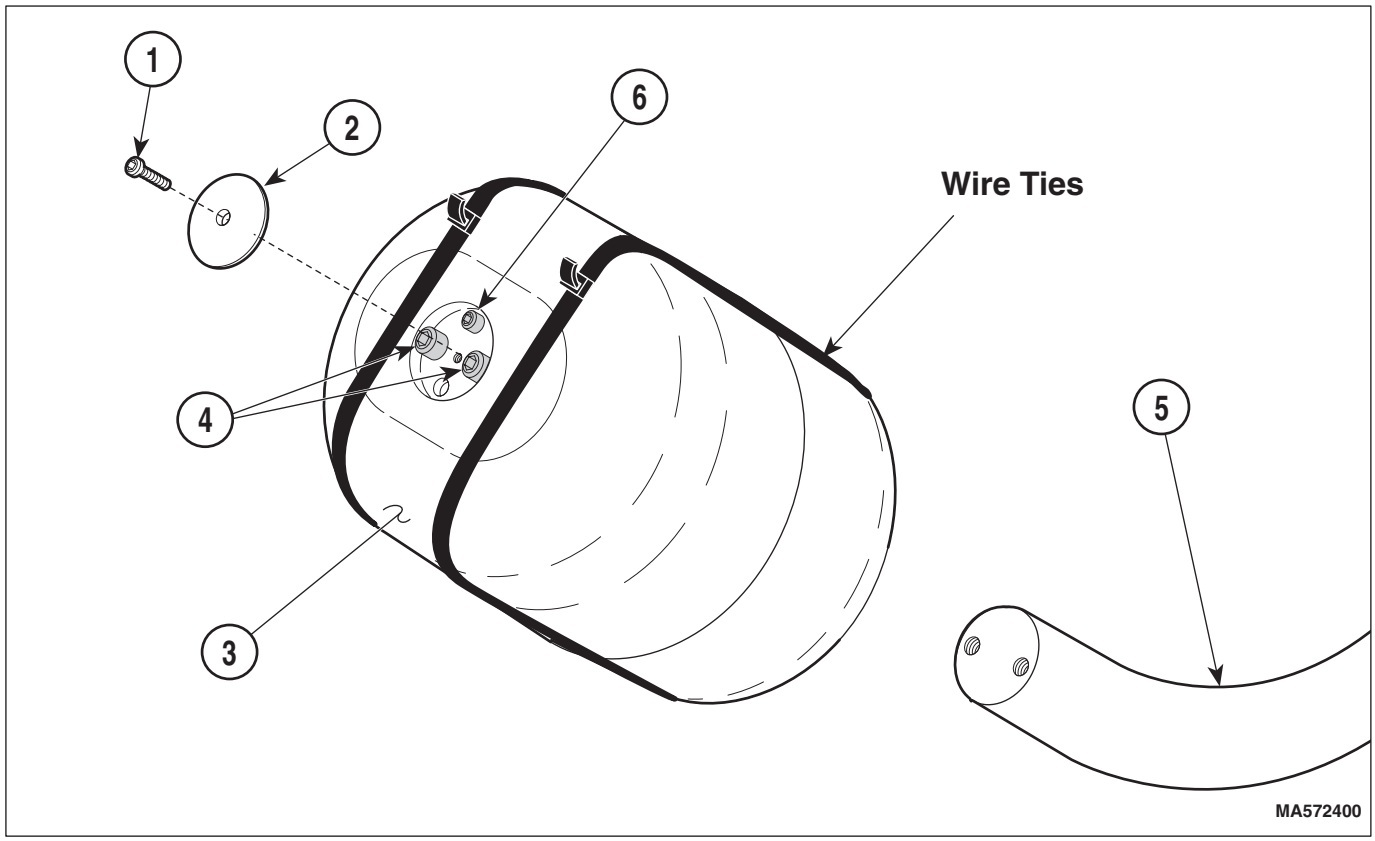

Figure 3. Counterbalance Housing Removal / Installation

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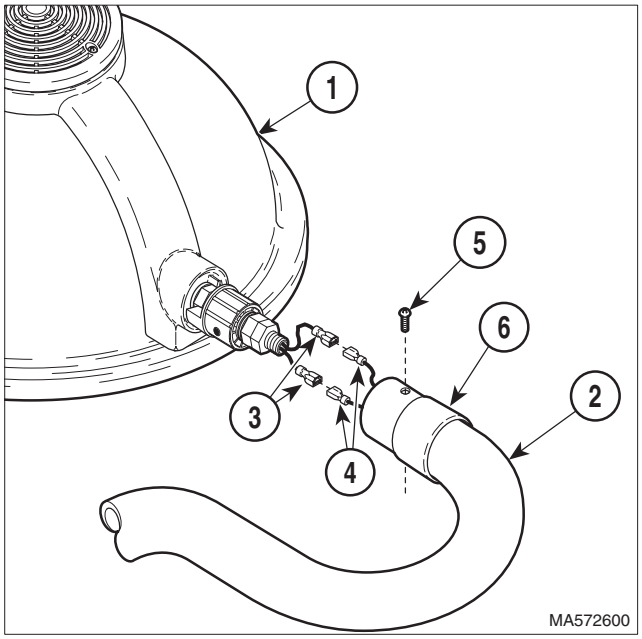
(3) Position lighthead (1, Figure 4) near lamp tube (2); then connect two bulb socket wires (3) to two wires (4).

WARNING
Make sure screws (5) are installed correctly. Failure to install screws correctly could allow lighthead to fall resulting in patient or staff injury.

(4) Install lighthead (1) on lamp tube (2) and secure with two screws (5).

(5) Slide pivot sleeve (6) down over joint. Position the pivot sleeve so that indentations inside pivot sleeve are over the screw heads.



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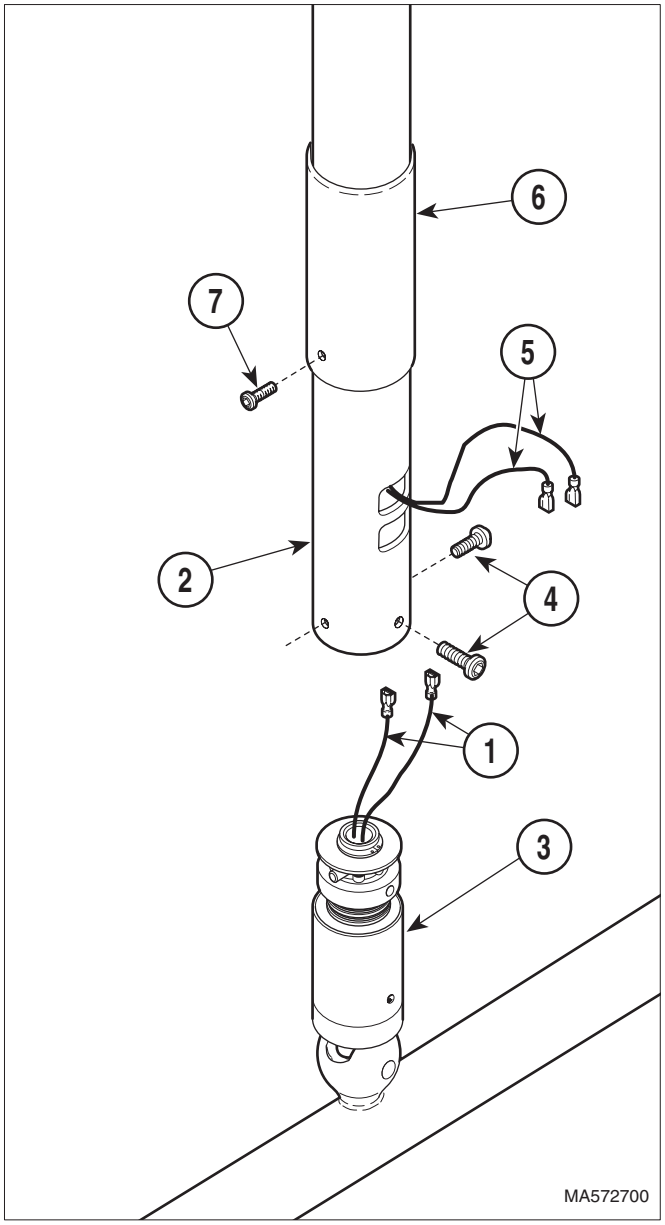

Figure 5. Cross Tube Installation

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(8) Adjust cross tube counterbalance and/or ball pivot joint tension if necessary. (Refer to ***Adjustment Procedure***).

(9) Slide ball pivot sleeve (6) down into position and secure with screw (7).

(10) Connect electrical power to unit.

ATTENTION!
After the new cross tube assembly has been installed and properly adjusted: repackage the old cross tube assembly, attach shipping label (included) and return it to Midmark.

Adjustment Procedure

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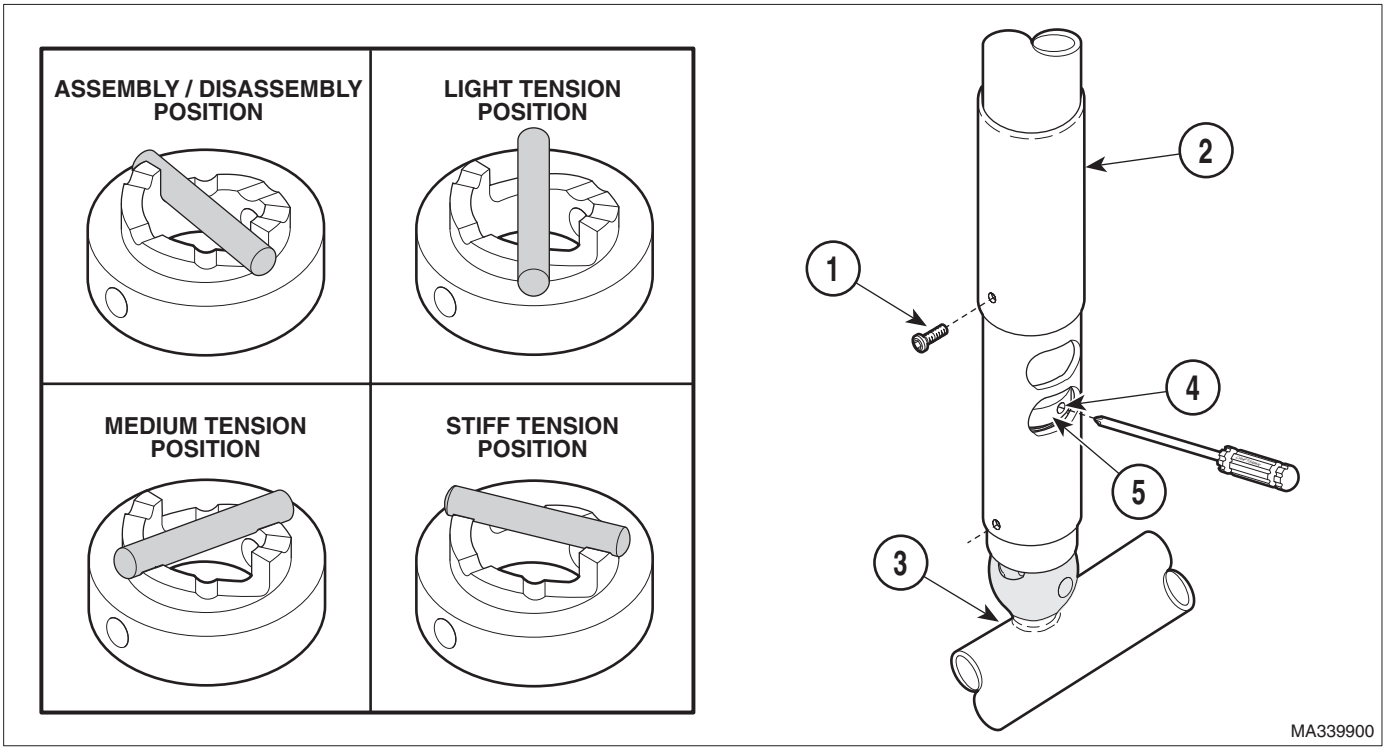

Figure 6. Ball Pivot Joint Tension Release / Adjustment

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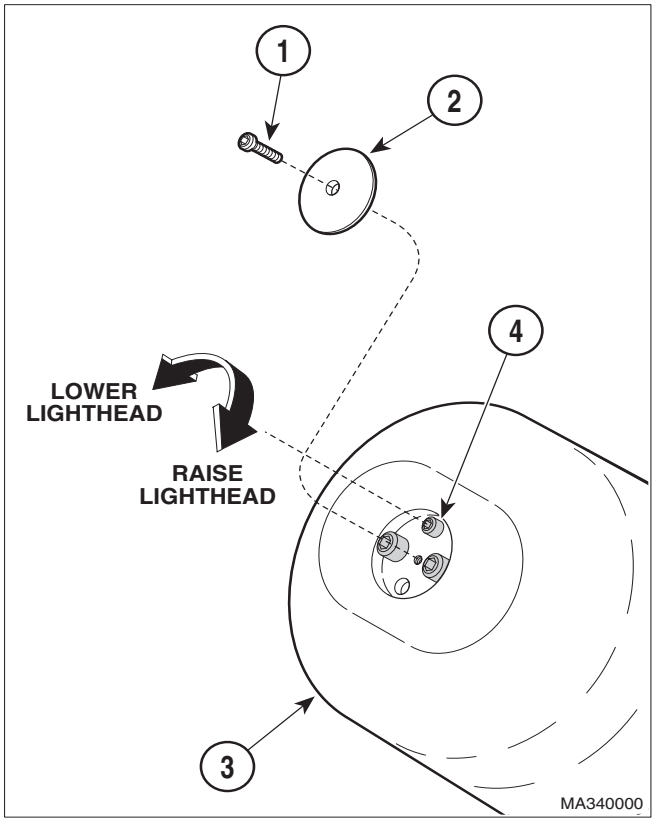
(4) Remove screw (1, Figure 7) and housing cap (2) from ballast housing (3).

(5) Adjust screw (4) until cross tube balances in a horizontal position.



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(8) Slide ball pivot sleeve (2) down into position and secure with screw (1).

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